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ABSTRACT

Intended for physical education teachers of the handicapped, teacher educators at teacher training institutions, and research workers in areas of the handicapped, the document reports the effects of a theoretical model of teaching psychomotor tasks on the motor behavior of mentally retarded children. Chapter 1 introduces a psychomotor teaching model and offers testing procedures to measure children's motor performance on selected motor parameters, including plantar flexion strength: quadriceps strength: hamstring strength: reaction time (hand/auditory, foot/auditory, hand/visual, foot/visual): balance: sit: and reach. Outlined for each of the motor parameters are the objective, equipment, protocol (task learing and test administration), and scoring. Chapter 2 describes the teaching of stunts and tumbling via a mastery learning psychomotor model. The bulk of the document consists of the entire curriculum of the psychomotor teaching model. A comprehensive evaluation of the psychomotor teaching model is reported in Chapter 3. (SBH)

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MASTERY LEARNING OF STUNTS AND TUMBLING ACTIVITIES FOR THE MENTALLY RETARDED

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MASTERY LEARNING OF STUNTS AND TUMBLING ACTIVITIES FOR THE MENTALLY RETARDED

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PREFACE

On November 4, 1976 a unique agreement between The University of Mississippi and North Mississippi Retardation Center entitled "Prescriptive Developmental Physical Education" was signed. The proposal was prepared conjointly by Dr. Jim R. Chambless and Dr. Randy Hendrix, Director of NMRC, with assistance from their respective staffs. The proposal established the first Human Performance Laboratory for Handicapped Children in the State of Mississippi and one of the few in existance in the nation. Under the terms of the proposal The University of Mississippi agreed to provide the professional and technical expertise via faculty and research assistantships, and NMRC agreed to provide space and the necessary equipment.

The rationale for the program hinges on current research involving prospects for achieving a moderate level of normalacy for the institutionalized resident with the ultimate goal of returning the client to the mainstream of society. The project is predicated on three major components which are service, teaching and research.

The service component of the project involves the cooperation of the Department of Recreation staff and facilities of the North Mississippi Retardation Center and the professional expertise of the faculty of the Department of HPER at The University of Mississippi. Diagnostic services

are provided and programs conjointly planned to improve the physiological capacity and psychomotor functionality of NMRC clients.

The teaching component is unparalleled due to the excellent, modern facilities provided by NMRC and the cooperation of the highly trained and skilled professional staff of NMRC. Undergraduate and graduate students are provided educational opportunities that include theoretical and practical experiences with handicapped children.

The research component provides for professional development of the staff of NMRC and the faculty and students of the Department of HPER at The University of Mississippi. Due to the close physical proximity of the two Institutions, conjoint research projects are formulated and executed. This manuscript is the result of one of many conjoint research projects. The original intent of this research was to determine the effects of a theoretical model of teaching psychomotor tasks on the motor behavior of mentally retarded children. After a year of intensive research and the involvement of many different and talented people, a decision was made to publish in book form rather than in a research journal which might be read by only a few qualified research workers.

The manuscript is intended for use by three distinct groups; on-line physical education teachers of the handicapped; teacher-educators at teacher training institutions; and research workers in areas of the handicapped.

The three chapters of the text are designed to take the reader from the theoretical through a comprehensive evaluation of the psychomotor teaching model. Chapter 1 contains a thorough explanation of the theoretical basis as well as a detailed description of the measurement procedures. Pragmatic application and the entire curriculum of the psychomotor teaching model are explained in Chapter 2. A comprehensive evaluation of the psychomotor teaching model is presented in Chapter 3.

ACKNOWLEDGMENTS

The authors are indebted to the many persons who have made this book possible. Special gratitude and appreciation are due to the following for their professional and technical assistance: Dr. Ansley Bacon-Prue, Director of the Mississippi University Affiliated Programs; Dr. Randy Hendrix, Director of the North Mississippi Retardation Center; Dr. Billy C. Spears, Regional Coordinator of the Mississippi University Affiliated Programs; Miss Debra Helms, Director of the Department of Recreation, North Mississippi Retardation Center, and Mr. B. B. Bowen, Director of the Department of Business at the North Mississippi Retardation Center.

We are thankful for the assistance of the HPER students who assisted with the teaching and gathering of data for this project. We are especially grateful to Mr. Robert Williamson and Dr. Barry Beedle for their assistance in the collection of materials and development of measurement techniques.

We are also grateful to the clients who participated in this program, many of whom discovered that learning is an enjoyable experience.

Chapter 1

INTRODUCTION TO A PSYCHOMOTOR TEACHING MODEL

I decline to accept the end of man.... I believe that man will not merely endure: He will prevail.

William Faulkner

These words spoken by William Faulkner at the acceptance of his Nobel Prize for Literature in Stockholm, Sweden and inscribed above the entrance of the "Ole Miss" library are particularly meaningful to those of us who work in the educational process. Educators have expended vast amounts of time and energy devising, implementing and discarding curricular models and designs. Psychomotor curricular models and designs, particularly, have often been desk-top manufactured and have not been subjected to rigorous testing in order to ascertain all changes or non-changes as a result of the instructional process. The measure of success has been most often determined by highly subjective evaluation methods and educators have attempted to transfer an intact curricular model to each of the several populations that are involved in American education.

One of the primary concerns of educators has involved the identification of skills that are essential in the educational process. In other words, educators have difficulty with decision making regarding a uniform set of skills that should be

learned by the child in the educational process. A parallel problem appears to be determining the mastery level that is essential for each skill and evaluation methodology for ascertaining that an appropriate level of mastery has occurred.

The prevailing construct that is advocated by many professional educators today and expounded by Bloom forms the guiding postulate for the formulation of this Experimental Stunts and Tumbling Program for mentally retarded children.

The construct advocated by Bloom is as follows:

> Most students become very similar with regard to learning ability, rate of learning, and motivation for further learning--when provided with favorable learning conditions. (2:10)

The above quoted construct only becomes meaningful if we can identify what is to be taught, and equally important what benefits will be accrued by the learner as a result of mastering the skills. Physical educators have never been bashful regarding claims and justification for the worth of their profession. Perhaps one of the most notable of claims that we have made involves the relationship between motor activities and learning to read. Some physical educators have suggested or strongly implied that the learning process of reading is enhanced by the mastery of motor skills or a psychomotor development program. However, when this hypothesis is subjected to vigorous testing we find that the purported generalization does not hold true. (17; 11:517-523; 9:441; 16:113-116; 14:20-21)

The authors have long suspected that any transfer that occurs from physical education (motor learning) to cognitive learning process is due in large part to the affective domain. Motivation primed by success in the physical arena of learning can easily be transferred to the cognitive arena of learning provided a similar environment and structure exists. For example, if a curriculum is progressive and immediate feedback is offered to the learner which reinforces his success, then as the tasks become more difficult the learner will bring more perseverance to the task. The classical illustration for this premise is exemplified by the infant learner as he begins to explore his environment. Parental approval and verbal exhortation tends to reinforce the infant's behavior and each progressive aspect of the walking process is slowly mastered until the crawling is perfected. The early tasks do not require as much perseverance as do the later tasks but the level of persistence increases as the child progresses through the various sequences. Environmental supports appear to play a significant role in the mastery process and for each progression skill, affective entry characteristics appear to be greater than for the preceding skill.

Perhaps this premise is a partial explanation for the student who excells in physical education and sports but has a great deal of difficulty regarding the cognitive process. In other words, an individual tends to like those activities which he believes he has done or can perform successfully.

Most mentally retarded children reflect this premise in regard to motor behavior, especially when something totally new is presented to them. It is virtually impossible for a new teacher or substitute to introduce a totally new motor activity and gain a positive response from a mentally retarded child. However, if the affective entry level is established on the basis of success and "learning confidence" is established with the authority figure (teacher), the mentally retarded child's motor learning rate often approximates the so-called "normal" child.

When compared with normal children the mentally retarded child has been found to achieve lower scores on tests of general motor skills. Although they are less able than the normal child in many ways, the mentally retarded child deviates less in motor ability than in any other characteristic. (Fait:196)

Children with sub-average intelligence find it hard to fit into the play patterns of normal children. They enter the world of play at a slow speed due to a lack of motor performance mastery; therefore, the child meets with repeated failures which lead to a lack of confidence and the development of a tendency to withdraw and adapt to an attitude of defeat.

Further evidence of this pattern of withdrawal is provided by Rarick, Widdop and Broadhead. They used the AAHPER Youth Fitness Test and found that mentally retarded children from age eight to eighteen performed less than normals on the flexed arm hang, sit-ups, shuttle run, standing broad jump, fifty yard dash, softball throw and 300 yard

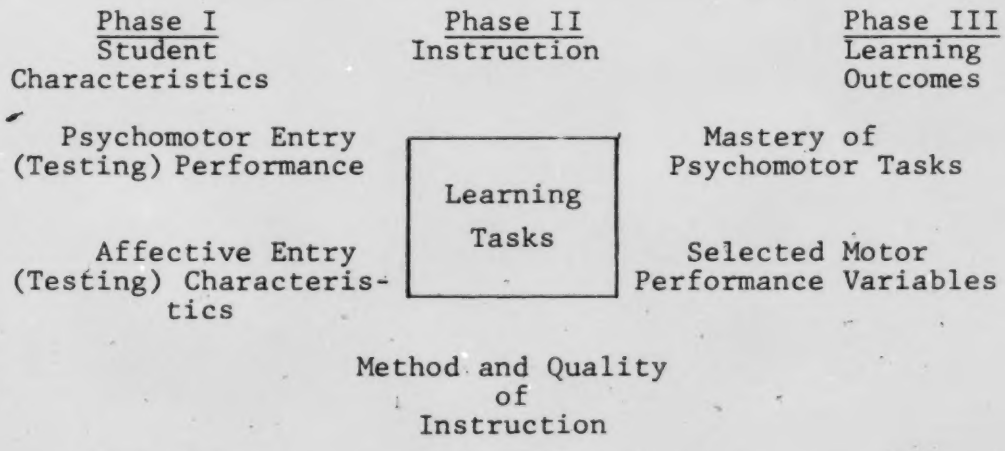
run-walk. The generalization can be made that the mentally retarded are less fit than other youngsters. (10:509)

Francis and Rarick studied 284 mentally retarded children having I.Q.'s ranging from 50 to 90 and chronological ages ranging from 7.5 to 14.5 years. A battery of eleven gross motor tests were given which were designed to measure strength, power, balance and agility. From the results of this research it was concluded that the retarded child was two to four years behind the maturation levels of normal children, and the discrepancy increased with each advancing age level. (6:792-793) Based on the finding of these and other research studies it appears that it is ludicrous to attempt to teach mentally retarded children motor activities by the standard school grade level based on chronological age. Traditional teaching methods and theory may not be appropriate for these children and in some cases may not be appropriate for the so-called normals.

Since gross motor performance of mentally retarded children appears to lag behind normals and since the mentally retarded adult will probably enter the labor force in a sector that requires utilization of physical capacity, the authors felt that a logical approach to this particular problem was to develop or adopt a curricular model that would improve the motor performance levels of mentally retarded children. Another prime consideration is that the content of the curricular model must provide enough individual performance feedback in order to formulate and foster positive intrinsic motivation in the learner.

Bloom's theoretical model of Mastery Learning provided a learning model that would incorporate these two primary components. The difference between learning theory and practical implementation can often be considerable and so the authors elected to use selected components of the theory for their pragmatic psychomotor model. The model as implemented was structured in the following manner.

Figure 1
Psychomotor Model of Mastery Learning



The two subcategories of Learner Entry Characteristics for the Psychomotor Model of Mastery Learning are Psychomotor Entry Performance and Affective Entry Characteristics of the mentally retarded child. The basic premise of the learning model is that the Psychomotor Entry Performance and Affective Entry Characteristic of the learner and the Quality of Instruction will determine the learning outcomes. These out-comes are Mastery of Psychomotor Tasks and improvement

of Selected Motor Performance Variables. When the student entry characteristics and the quality of instruction are favorable for mentally retarded children, then all the learning outcomes should be at a positive level.

STUDENT CHARACTERISTICS

Two interdependent variables which are central to this psychomotor learning model are:

a. The extent to which the mentally retarded child has already learned the basic psychomotor prerequisites to the motor learning to be accomplished.

b. The extent to which the mentally retarded can be motivated to engage in the psychomotor learning process.

More specifically, the model utilizes two dependent variables to measure psychomotor learning outcomes. The first measure was a psychomotor task learning process and then a measurement of motor behavior after our selected tasks were mastered. To test this theoretical model, twenty-two mentally retarded (TMR's) ranging in age from 10 to 15 years were selected from the physical education classes at North Mississippi Retardation Center, Oxford, Mississippi. Eleven motor performance parameters were selected that would provide a representative sample of the children's total psychomotor behavior.

The motor performance measures selected were structured into learning tasks and precise test procedures were developed. The mentally retarded children (male/female) selected for the study were acquainted with the Human

Performance Laboratory for Handicapped Children at North Mississippi Retardation Center in groups of two over a period of approximately sixteen weeks. They were allowed to view and touch the measurement equipment on a weekly basis. After the students were familiar with the equipment and had developed a positive attitude regarding the laboratory and staff, task learning was initiated for the children. No attempt was made to record initial measures on the selected motor parameters, but rather the laboratory staff implemented positive verbal praise to the children into the task learning process. After six weeks of practice, measures were recorded and learning curves plotted for each child. As soon as the learning curves peaked, indicating that the actual learning of performance parameters had ceased, the pre-measurement of each motor performance parameter was begun. The testing procedures used to measure the children's motor performance on selected motor parameters were as follows:

PARAMETER (VARIABLE) 1
PLANTAR FLEXION STRENGTH TEST

I. OBJECTIVE

The purpose of this test is to determine the maximum static strength of the ankle musculature during a plantar flexion movement.

II. EQUIPMENT

Plantar flexion frame mounted in doorway
200-pound cable tensiometer
Specially constructed leather stirrup
12 inches of 3/32 inch 7 X 7 aircraft cable and chain
6 feet of chain with one-inch links
2 "S" hooks
Carpet for subject to lie upon

III. PROTOCOL

A. Task Learning

On the day prior to the actual testing day, subject should be brought to the testing site and after sufficient instructions be given an ample number of trials to learn the desired task. Trails should be administered exactly as on the actual testing day. This procedure keeps learning effect at a minimum to insure that differences in score will be due to performance and not learning effect during the actual test.

B. Test Administration

1. Procedure for Equipment Set-up

Have the subject lie on his back with his shoulders snug against the pads and with both legs fully extended. Remove the subject's shoe from his preferred foot. Place the stirrup on the ball of the preferred foot and secure the loop. Hook the stirrup, cable, and chain together with the "S" hooks. Attach the chain to the upper hook of the frame. Maintain the subject's foot in a 90° position while the chain is being hooked to insure that there is no slack in the chain. Measure the tension in the cable with the tensiometer prior to the test trial. Ten pounds or less is acceptable.

2. Instructions for Subject

Using the other foot, explain to the subject that you want him to push his foot against the force of your hand. Practice this several times until he understands what is expected. Then explain that the foot with the stirrup will now be tested. The push should be smooth without jerking the cable. On the command "push" he should push with his foot as hard as possible.

3. Responsibilities of Technicians

Technician 1 should keep the stirrup on the ball of the subject's foot and make sure that the knee does not come up off the ground during the trial.

Technician 2 should make sure that the subject's head and shoulders are alligned correctly during each trial. He should provide positive motivation of verbal praise for maximum efforts.

Technician 3 should be in position ready with the cable tensiometer and clamp it into place at the correct time. He should read it and record the number of pounds on the data card.

4. Actual Test Administration

As soon as there is tension on the cable, the tensiometer should be clamped into place. After a full effort, unclamp the tensiometer, read the number of pounds, and record on paper. The subject should be allowed three tries.

IV. SCORING

Average the two best scores for a final score.

PARAMETER (VARIABLE) 2
QUADRICEPS STRENGTH TEST

I. OBJECTIVE

The purpose of this test is to determine the maximum static strength of the quadriceps muscle group in a person's dominant leg.

II. EQUIPMENT

Goniometer
Clark strength table
Foot strap
12 inches of 3/32 inch 7 X 7 aircraft cable and chain
"S" hook
200-pound cable tensiometer

III. PROTOCOL

A. Task Learning

On the day prior to the actual testing day, subject should be brought to the testing site and after sufficient instructions be given an ample number of trials to learn the desired task. Trials should be administered exactly as on the actual testing day. This procedure keeps learning effect at a minimum to insure that differences in score will be due to performance and not learning effect during the actual test.

B. Test Administration

1. Procedure for Equipment Set-up

Have the subject sit upright on the edge of the strength table. Place the foot strap above the ankle of his dominant leg. Attach the "S" hook to the foot strap and attach the cable and chain to the strap. Using the goniometer, bend the subject's dominant leg so that the femur forms a 90° angle with the tibia and fibula. Hold the leg in place and attach the chain on the hook under the table. Re-check the angle of the bones after the chain is in place. 85 to 95 is an acceptable range.

2. Instructions for Subject

Using the other leg, explain to the subject that you want him to raise that leg against the force of your hand. Practice this several times until he understands what is expected. Then explain that the leg with the foot strap will now be tested. The pull should be smooth without jerking the cable. On the command "pull," he should pull forward with his leg as hard as possible.

3. Responsibilities of Technicians

Technician 1 should re-check the subject's posture to assure that he is sitting up straight and alligned correctly. Make sure he maintains this posture during each strength test. Provide positive motivation of verbal praise for maximum effort.

Technician 2 should be in position ready with the cable tensiometer and clamp it into place at the correct moment. He should read it and record the number of pounds on the data card.

4. Actual Test Administration

As soon as there is tension on the cable, the tensiometer should be clamped into place. After a full effort, unclamp the tensiometer, read the number of pounds, and record on paper. The subject should be allowed three tries.

IV. SCORING

Average the two best scores for a final score.

PARAMETER (VARIABLE) 3
HAMSTRING STRENGTH TEST

I. OBJECTIVE

The purpose of this test is to determine the maximum static strength of the hamstring muscle group in a person's dominant leg.

II. EQUIPMENT

Clark Strength Table
Foot Strap
12 inches of 3/32 inch 7 X 7 aircraft cable and chain
"S" hook
200-pound cable tensiometer

III. PROTOCOL

A. Task Learning

On the day prior to the actual testing day, subject should be brought to the testing site and after sufficient instructions be given an ample number of trials to learn the desired task. Trials should be administered exactly as on the actual testing day. This procedure keeps learning effect at a minimum to insure that differences in score will be due to performance and not learning effect during the actual test.

B. Test Administration

1. Procedure for Equipment Set-up

Have the subject lie face down on the strength table with his feet protruding about 6 inches past the end of the table. Place the foot strap above the ankle of his dominant leg. Attach the "S" hook to the foot strap and attach the cable and chain to the strap. Secure the chain to the hook at the bottom of the strength table so that there is no slack in it.

2. Instructions for Subject

Using the other leg, explain to the subject that you want him to raise that leg by bending his knee against the force of your hand. Practice this until he understands what is expected. Then explain that the leg with the foot strap will now

be tested. The pull should be smooth without jerking the cable. On the command "pull," he should pull as hard as possible.

3. Responsibilities of Technicians

Technician 1 should re-check the subject's position on the table to assure that he is alligned correctly. Make sure he maintains this position during each strength test. Do not let his hips or knee come up off the table. Provide positive motivation of verbal praise for maximum effort.

Technician 2 should be in position ready with the cable tensiometer and clamp it into place at the correct time. He should read and record the number of pounds on the data card.

4. Actual Test Administration

As soon as there is tension on the cable, the tensiometer should be clamped into place. After a full effort, unclamp the tensiometer, read the number of pounds, and record on paper. The subject should be allowed three tries.

IV. SCORING

Average the two best scores for a final score

PARAMETER (VARIABLE) 4
SHUTTLE RUN

I. OBJECTIVES

The objective of the shuttle run is to determine movement time which measures the ability of the subject to run rapidly between two given marks.

II. EQUIPMENT

A. Task Learning

On the day prior to actual testing day, each subject should be brought to the testing site and after sufficient instructions, be given an ample number of trials to learn the desired task. Trails should be administered exactly as on the test day. This should keep the learning effect at a minimum. It assures that differences in score will be due to performance and not learning effect during actual testing.

B. TEST ADMINISTRATION

1. Procedures for equipment set-up

Two parallel lines are marked on the floor thirty feet apart. One of these lines is the starting line, which should have an unobstructed area behind it at least twenty feet long to give the subject an opportunity to check his speed after passing this line upon completing his run.

2. Instructions for subject

The subject is instructed to run to the opposite line, pick up one bean bag, return to starting line, and place the beanbag behind the line; he then is instructed to run back and pick up the second beanbag, which he carries back across the starting line stepping on the stop pad.

3. Actual Test Administration

Trail one begins with the subject standing with the toes of his forward foot on the foot switch that starts the shuttle run. On the signal "go," he runs to the opposite line, picks up one beanbag, returns it to the starting line, and places the beanbag behind the line; he then runs back and picks up the second beanbag, which he carries back across the starting line; he steps on the stop pad on the second time through. After a resting period, the subject is given a second opportunity to run the test.

IV. SCORING

The score for this test is the average of the two trials, recorded in seconds to the nearest one thousandth of a second.

PARAMETER (VARIABLE) 5
REACTION TIME/HAND/AUDITORY

I. OBJECTIVE

The purpose of this test is to determine the reaction time of the hand to an auditory stimulus.

II. EQUIPMENT

Dekan Timer
Hand Switch
Table of Random Numbers

III. PROTOCOL

A. Task Learning

On the day prior to the actual testing day, subject should be brought to the testing site and after sufficient instructions be given an ample number of trials to learn the desired task. Trials should be administered exactly as on the actual testing day. This procedure keeps learning effect at a minimum to insure that differences in score will be due to performance and not learning effect during the actual test.

B. Test Administration

1. Procedures for Equipment Set-Up

Plug hand switch into "stop on make contact A" channel of Dekan Timer. Place the hand switch in subject's dominate hand in such a way that his thumb can be used to depress the button. Turn signal switch on.

2. Instructions for Subject

Explain to the subject that reaction time will be tested using his dominate hand to an auditory stimulus. The subject is instructed to sit in an upright chair with the hand switch in his dominate hand and his thumb on the button. On the sound of the buzzer, he is to depress the button.

3. Responsibilities of Technicians

Technician 1 gives instructions to subject and gives command "ready" to subject. He operates the Decan Timer.

Technician 2 records times and positions subject.

4. Warm-up

The subject is given five practice trials prior to actual testing.

5. Actual Test Administration

The test is composed of ten trials beginning with the vocal command "ready" from one to eight seconds before each trial. The time intervals from the command "ready" until the presentation of the stimulus are taken from a table of random numbers. The test is performed with the subject's eyes closed.

Have subject sit in an upright chair with the front half of his dominant foot on the timer box. Have subject to close his eyes. Tester gives command "ready" and activates the internal timer. When the buzzer sounds, the subject depresses the box. This will determine the time between the stimulus (buzzer) and the response (depression of foot box). Record the time and reset the timer.

IV. SCORING

The reaction time for each of the ten trials is recorded. The lowest five scores are averaged.

PARAMETER (VARIABLE) 6

REACTION TIME/FOOT/AUDITORY

I. OBJECTIVE

The purpose of this test is to determine the reaction time of the foot to an auditory stimulus.

II. EQUIPMENT

Dekan Timer
Foot Pedal Attachment
Table of Random Numbers

III. PROTOCOL

A. Task Learning

On the day prior to the actual testing day, subject should be brought to the testing site and after sufficient instructions be given an ample number of trials to learn the desired task. Trials should be administered exactly as on the actual testing day. This procedure keeps learning effect at a minimum to insure that differences in score will be due to performance and not learning effect during the actual test.

B. Test Administration

1. Procedures for Equipment Set-Up

Plug foot switch into "stop on make contact A" channel of Dekan Timer. Place foot switch on floor in such a way that the subject can place the front half of his dominant foot on. Turn signal switch on.

2. Instructions for Subject

Explain to subject that reaction time will be tested using his dominant foot to an auditory stimulus. The subject is instructed to sit in an upright chair with the front half of his dominant foot on the timer box. He is to keep his eyes closed throughout the entire test. On the sound of the buzzer, he is to depress the box with his foot.

3. Responsibilities of Technicians

Technician 1 gives instructions to subject and gives command "ready" to subject. He also operates the Decan Timer.

Technician 2 records times and positions subject.

4. Warm-Up

The subject is given five practice trials prior to actual testing.

5. Actual Test Administration

The test is composed of ten trials beginning with the vocal command "ready" from one to eight seconds before each trial. The time intervals from the command "ready" until the presentation of the stimulus are taken from a table of random numbers. The test is performed with the subject's eyes closed.

Have subject sit in an upright chair with the hand switch in his dominant hand. Have subject to close his eyes. Tester gives command "ready" and activates the internal timer. When the buzzer sounds, the subject depresses the button. This will determine the time between the stimulus (buzzer) and the response (depression of button). Record the time and reset the timer.

IV. SCORING

The reaction time for each of the ten trials is recorded. The lowest five scores are averaged.

PARAMETER (VARIABLE) 7
REACTION TIME/HAND/VISUAL

I. OBJECTIVE

The purpose of this test is to determine the reaction time of the hand to a visual stimulus.

II. EQUIPMENT

Dekan timer
Hand switch
Table of random numbers

III. PROTOCOL

A. Task Learning

On the day prior to the actual testing day, subject should be brought to the testing site and after sufficient instructions be given an ample number of trials to learn the desired task. Trials should be administered exactly as on the actual testing day. This procedure keeps learning effect at a minimum to insure that differences in score will be due to performance and not learning effect during the actual test.

B. Test Administration

1. Procedures for Equipment Set-up

Plug hand switch into "step on make contact A" channel of Dekan Timer. Place the hand switch in subject's dominant hand in such a way that his thunb can be used to depress the button. Plug light bulb into "switch off" channel.

2. Instructions for Subject

Explain to the subject that reaction time will be tested using his dominant hand to a visual stimulus. The subject is instructed to sit in an upright chair with the hand switch in his dominant hand and his thunb on the button. His eyes are to be focused on the bulb. On the flash of the light, he is to depress the button.

3. Responsibilities of Technicians

Technician 1 gives instructions to subject and gives command "ready" to subject. He operates the Dekan Timer.

Technician 2 records times and positions subject.

4. Warm-up

The subject is given five practice trials prior to actual testing.

5. Actual Test Administration

The test is composed of ten trials beginning with the vocal command "ready" from one to eight seconds before each trial. The time intervals from the command "ready" until the presentation of the stimulus are taken from a table of random numbers.

Have subject sit in an upright chair with the hand switch in his dominant hand. Have subject to focus his eyes on the bulb. Tester gives command "ready" and activates the internal timer. When the light flashes, the subject depresses the button. This will determine the time between the stimulus (light) and the response (depression of the button). Record the time and reset the timer.

IV. SCORING

The reaction time for each of the ten trials is recorded. The lowest five scores are averaged.

PARAMETER (VARIABLE) 8
REACTION TIME/FOOT/VISUAL

I. OBJECTIVE

The purpose of this test is to determine the reaction time of the foot to a visual stimulus.

II. EQUIPMENT

Dekan Timer
Foot Pedal Attachment
Table of Random Numbers

III. PROTOCOL

A. Task Learning

On the day prior to the actual testing day, subject should be brought to the testing site and after sufficient instructions be given an ample number of trials to learn the desired task. Trials should be administered exactly as on the actual testing day. This procedure keeps learning effect at a minimum to insure that differences in score will be due to performance and not learning effect during the actual test.

B. Test Administration

1. Procedures for Equipment Set-Up

Plug light bulb into "signal off" channel. Plug foot switch into "stop on make contact A" channel of Dekan Timer. Place foot switch on floor in such a way that the subject can place the front half of his dominant foot on.

2. Instructions for Subject

Explain to the subject that reaction time will be tested using his dominant foot to a visual stimulus. The subject is instructed to sit in an upright chair with the front half of his dominant foot on the timer box. His eyes are to be focused on the bulb. On the flash of the light, he is to depress the box with his foot.

3. Responsibilities of Technicians

Technician 1 gives instructions to subject and gives command "ready" to subject. He also operates the Dekan Timer.

Technician 2 records times and positions subject.

4. Warm-Up

The subject is given five practice trials prior to actual testing.

5. Actual Test Administration

The test is composed of ten trials beginning with the vocal command "ready" from one to eight seconds before each trial. The time intervals

from the command "ready" until the presentation of the stimulus are taken from a table of random numbers.

Have subject sit in an upright chair with the front half of his dominant foot on the timer box. Have subject to focus his eyes on the bulb. Tester gives command "ready" and activates the internal timer. When the light flashes, the subject depresses the box. This will determine the time between the stimulus (light) and the response (depression of foot box). Record the time and reset the timer.

IV. SCORING

The reaction time for each of the ten trials is recorded. The lowest five scores are averaged.

PARAMETER (VARIABLE) 9 and 10

BALANCE TEST

I. OBJECTIVE

The purpose of this test is to measure the subjects ability to assume and maintain a balanced position on a stability platform.

II. EQUIPMENT

Stabilometer-Lafayette Instruments, Co.
Master timer light
Interval Timer
Data Recorder
Three 1/1000 second chronometer clocks

III. PROTOCOL

A. Task Learning

On the day prior to actual testing day, each subject should be brought to the testing site and after sufficient instruction be given an ample number of trials to learn the desired task. Trials should be administered exactly as on the test day. This should keep the learning effect at a minimum. It assures that differences in score will be due to performance and not learning effect during actual testing.

B. Test Administration

1. Procedure for Equipment

The stabilometer should be plugged in to the data recorder using the banana plugged cord. The interval timer should be set on twenty seconds and the rest period timer should also be set for twenty seconds. For the first three trials of the test, the degree setting on the platform should be set at thirty degrees. For the second three trials, the degree setting should be set at twenty degrees.

2. Instructions for the Subject

Instruct the subject that he will assume a standing position on the platform. That he will receive six trials for the test. Also instruct him that when he hears the command "get ready" to try and balance the platform. And, that when he hears the command to "go," that the trial is in progress. Finally, when he hears the command to "stop," he is to allow the platform to go to one side for that period of time.

3. Warm-up.

No particular warm-up is necessary for this test.

4. Responsibilities for Technicians

Technician 1 will operate the data recorder and clocks.

Technicians 2 and 3 will assist the subject in body placement on the platform and also act as spotters while the subject is being tested.

5. Actual Test Administration

The subject is assisted to the platform by the technicians. He is given assistance in assuming a comfortable position. On the command of "get ready," he attempts to balance the platform. On the command of "go" the trial begins. For that twenty second period the subject should try to balance the platform. At the end of the trial, technician 1 should give the command "stop" and tell the subject to rest. Three trials should be given at thirty degrees and three at twenty degrees.

IV. SCORING

Both excursions (trips to the left and right of center) and times should be recorded for each trial. Times can be obtained from the clocks and excursions from the data recorder. After all data have been collected, average the times and excursions for the entire test for each degree setting.

PARAMETER (VARIABLE) 11

SIT AND REACH TEST

I. OBJECTIVE

To measure the flexibility of the hip joint.

II. EQUIPMENT

For the purpose of this test, a plantar flexion frame was used to mount a centimeter ruler on. The ruler is extended out from the edge of the frame seven (7) centimeters and was tacked into place.

III. PROTOCOL

A. Task Learning

On the day prior to actual testing day, each subject should be brought to the testing site and after sufficient instructions, be given an ample number of trials to learn the desired task. Trials should be administered exactly as on the test day. This should keep the learning effect at a minimum. It assures that differences in score will be due to performance and not learning effect during testing.

B. Test Administration

1. Procedures for Equipment Set-up

Turn the plantar flexion frame in such a way that the ruler protrudes out from the edge of the frame seven cm. Place two pieces of athletic tape on the frame edge five (5) inches on either side of the ruler to mark heel placement.

2. Instructions for subject

Instruct the subject to sit on the floor with his legs fully extended and his heels on the tape marks. Instruct the subject to bend

forward at the hips and with his hands together, attempt to touch the ruler at the farthest point possible.

3. Warm-up

Allow the subject to assume the correct position and bob forward to loosen the muscles necessary in the task.

4. Responsibilities for Technicians

For this test, Technician 1 and 2 should keep the subjects heels in position and also keep the subjects knees down on the floor during the trials. Technician 3 should observe the ruler and record attempts. All three technicians should verbally encourage the subjects.

5. Actual Test Administration

Place the subject in proper position on the floor. With back straight, knees extended and heels on the marks, have subject put his hands together and raise his arms over his head. At this point, have the subject bob forward and touch the ruler as far as possible. Record each of three trials.

IV. SCORING

Each trial is recorded when completed. The scores may either be in the "plus" or "minus" direction depending on whether the subject touched the ruler above or below the edge of the frame.

Test-Retest reliability procedures were used. At least one day was allowed to elapse before the re-test took place. The test-retest correlation coefficients are presented in Table 1. The excellent coefficient of reliability for mentally retarded children on the selected motor performance parameters were due to the affective climate nutured by the positive interaction with the lab staff during the learning process. Negative reinforcement was not practiced and verbal praise

was offered generously to each of the children. The only negative discipline that occurred was denial of full laboratory practice time if the child presented a behavior problem to the staff members. This procedure proved to be a powerful positive motivation factor. The natural affinity that often transpires between college students and mentally retarded children was evident.

TABLE 1
TEST-RETEST CORRELATION COEFFICIENTS
N=22

Variable	r
1. Plantar Flexion (lbs.)	0.935
2. Quadriceps Strength (lbs.)	0.914
3. Hamstring Strength (lbs.)	0.897
4. Shuttle Run (Seconds)	0.923
5. Hand Audio (Seconds)	0.897
6. Foot Audio (Seconds)	0.843
7. Hand Visual (Seconds)	0.883
8. Foot Visual (Seconds)	0.857
9. Balance 30 Degrees (Seconds)	0.905
10. Balance 20 Degrees (Seconds)	0.923
11. Flexibility (Centimeters)	0.964

The sequency of motor development for both the mentally retarded and normals seems to be very similar, however, the retarded child progresses through the sequence at a slower or delayed rate. This is substantiated by the studies conducted by Rarick and others which found that mentally retarded children's motor development followed essentially the same trends as in normals. Flex differences in retarded boys and girls were similar to those noted in normal children, the boys showing superiority in all tests and all ages. (3:447-456; 10:509-519) Since the sequential physical development is the same for both the mentally retarded and normal child, physical education programs for the retarded may be accomplished through a progressive set of learning tasks. Physical educators need to remember that although the mentally retarded are less able in many ways, they deviate less in motor ability than in any other characteristic.

Mastery learning as advocated by Bloom provides a remarkable educational structure for learning when applied to the psychomotor domain. The three primary components of the Mastery Learning Theory are Student Entry Characteristics, Quality of Instruction and Learning Outcomes. (2:9,11) Psychomotor and affective entry characteristics for mentally retarded children are generally adequate in the psychomotor domain particularly when compared to cognitive development. Most mentally retarded children have had some success in the psychomotor domain. If they have not, the mentally retarded

Chapter 2

TEACHING STUNTS AND TUMBLING VIA A MASTERY LEARNING PSYCHOMOTOR MODEL

Physical education can play a vital role in the learning process of mentally retarded children. Through the physical domain it is possible to dramatically alter the self-concept and self-esteem of the mentally retarded child in a positive manner. Advantages from the physical education program are primarily in the affective and psychomotor domains but the positive gains from these two domains can be readily transferred to the cognitive domain in the form of "Intrinsic Motivation for Success." (13:418; 15:178; 4:2-3)

Francis and Rarick studied 284 mentally retarded children having I.Q.'s ranging from 50 to 90 and chronological ages ranging from 7.5 years to 14.5 years. A battery of eleven gross motor tests were given which were designed to measure strength, power, balance and agility. They concluded that the retarded child was two to four years behind the maturation levels of normal children, and, the discrepancy increased with each advancing age level. (6:792)

A study by Howe, comparing the motor skills of mentally retarded and normal children, revealed similar results. In this case, normal children began at higher levels and achieved higher absolute scores. This was particularly true in areas of strength and balance. (7:352)

can generally be readily elevated by verbal reinforcers of praise and self-testing activities that tend to bring strong intrinsic rewards to the learner.

The quality of instruction becomes crucial in Mastery Learning as it is in other types of learning theory. In other words it is the "teaching" and not the "teacher" that is central, and it is "environment for learning" rather than the physical characteristic of the class and physical activity area that is important for psychomotor learning. Caroll in a paper on a model of school learning, defined Quality of Instruction in terms of the "degree to which the presentation, explanation, and ordering of elements of the task to be learned approach the optimum for a given learner." (2:111) We accept this definition in part but with an important addition for our special population.

Stability of Presentation is essential to the psychomotor learning process of the mentally retarded child. Stability of Presentation as we define the term refers to an orderly and systematic framework of presentation that maximizes the utilization of the mentally retarded child's senses. Within this framework occurs four key elements of instruction—cues, participation, reinforcement and feedback/corrections.

The Stability of Presentation model that we devised to use with EMR and TMR children at North Mississippi Retardation Center is based on seven steps in the teaching of a learning task. The seven steps used are:

1. Physical Demonstration. Physical demonstration implies the presentation of a psychomotor learning task (by the instructor or teacher aide) in its entirety. This is done to provide the students with a visual picture.

2. Verbal Explanation. A verbal explanation of a learning task accompanies the physical demonstration which is enthusiastic and animated. (Often students will request that the demonstration and explanation be repeated and their request is granted.)

3. Manual Manipulation. Manual manipulation means that the student is actually manipulated through each segment of the psychomotor learning task by the teacher or teacher aide.

4. Minimal Physical Assistance. Minimal physical assistance implies limited physical contact between the teacher and student.

5. Verbal Prompt. The verbal prompt method indicates no physical contact with the students. Each student receives verbal instruction and reinforcement as needed.

6. Upon Request. Upon request implies that the student has mastered the psychomotor learning task and will be able to perform this particular task when requested.

7. Mastery Demonstration. Mastery demonstration implies the incorporation of a variety of psychomotor learning tasks into a single combination or routine. The mastery demonstration is conducted before an audience composed of fellow students, teachers, teacher aides, parents, etc.

Cues, participation, reinforcement and feedback/ corrections are used to varying degrees within each of the steps of the Stability of Presentation Model. Cues include visual, auditory and kinesthetic stimuli as well as directions as to what the learner is to do in the psychomotor learning process. The student must understand or comprehend the cues if he is to make use of them. The primary cue is a physical demonstration of the psychomotor learning task which the mentally retarded student is to reproduce. Cues may also be in the form of verbal expression or sequences provided by position or spatial location. (2:94-95) A cue generally becomes stronger by repetition, by adding dramatic intensity, and by other arrangements which bring it to the attention of the mentally retarded learner. Physical educators need to keep in mind that cues which are easily understood in one form by some students will have to be expressed in other ways before they become meaningful to other students.

Cues are useless unless the learner has some way of meaningfully using them through participation. The Stability of Presentation Model moves from passive to active participation on the part of the learner. Participation or the amount of practice, particularly in the initial learning stage is directly proportional to the mastery of a psychomotor task. Task specificity is essential in the structure of a learning task. Each segment of the psychomotor learning task must be identified and instructional methodology developed specifically

for it. Repetition or practice of each segment is essential in the mastery of a psychomotor learning task. (8:227-228) However, not all participation must be overt and observable. Individual students differ in the amount of practice they may need to master a psychomotor learning task. Students often learn from their peers through several different modes of communication which may or may not be observed by the teacher.

Mentally retarded students are provided "reinforcement" in a number of ways which include simple recognition of the child, giving attention to the child, close physical proximity to the child, gesturing, smiling, frowning and verbal praise. In our research at North Mississippi Retardation Center we have found the preceding reinforcers more effective with residential clients than tokens or candy. Reinforcers are available from sources other than the teacher; however, the teacher must plan and orchestrate the appropriate delivery if they are to be effective. The frequency of reinforcers decreases but intensity increases as mastery occurs, with the greatest number occurring in the initial steps of the learning task.

The psychomotor mastery learning model is highly dependent upon the feedback/correctives component. With mentally retarded, even the best use of cues, participation and reinforcement will be differentially effective for individual students. A set of cues or the amount of participation or

practice that is optimal for one child may be inappropriate for another. It is essential that feedback (positive and corrective) be offered to each student as soon as possible to maximize the efficiency of the learning process. (11:94-99) The teachers must have different approaches or alternative cues in their repertoire and plans for additional practice time.

SAFETY PRECAUTIONS

The need for adequate safety precautions in locomotor activities, particularly gymnastics, cannot be over emphasized when working with the mentally retarded child. Many of the students who participated in this study exhibited a great deal of faith in the instructors and a total lack of fear. Often this lack of fear has to be tempered by the instructors to insure the safety of the individual. Many times children express a desire to move to more difficult stunts without having mastered preliminary activities. This should be avoided.

SAFETY TIPS FOR STUNTS AND TUMBLING

1. Conduct a brief warm-up period before you start practicing. The emphasis should be placed on flexibility, strength and endurance exercises.
2. Use plenty of mats and keep them a suitable distance from the walls.
3. Do not overlap mats causing humps or ridges.
4. Do not allow the performers to follow each other too closely.

5. Allow no horseplay. Often this becomes difficult since the children's attention span is generally very short.

6. Remove all jewelry from the participants. The spotters should also remove rings and watches for the safety of the performer.

7. Make sure the floor exercise area is free of debris or sharp objects. Portions of walls and doors jutting into the floor area should be well padded.

8. Use any and all safety equipment, i.e., safety belts, crash pads, landing mats, etc., whenever possible.

9. Follow a progression of skills. These should be well planned and structured before you start your teaching process.

PROGRESSIVE STUNTS AND TUMBLING CURRICULUM

In order to assist teachers, we have constructed what we term a "Schedule of Instruction" which provides a segmental progression of the skills being taught. The first psychomotor task presented in the Progressive Stunts and Tumbling Curriculum is entitled "Line Walking." This task is partitioned into key progressive segments. By having a pre-planned progressive skill plan, the teacher is able to readily identify the key teaching components, maintain a progression record of the students learning, evaluate the psychomotor performance of the child, and have each student's starting point at which to begin the next teaching session.

Each skill and stunt in the Schedule of Instruction has the seven items used in Stability of Presentation listed. The left hand column has all seven Stability of Presentation

items listed and space is provided for the date the stunt and skills are initiated.

Under the heading Stunt and Skills, the name of the stunt and a sequence of the progressive skills is listed. At the bottom of the sequence, a comment is provided for the teacher to use to enrich the learning process or space is provided for the teacher to write a comment.

The column on the right side of the Schedule of Instruction (4. Minimal Physical Assistance, 5. Verbal Prompt, 6. Upon Request, 7. Mastery Demonstration) is used to note evaluation of the stunt and/or skills. If an individual sheet is prepared for each child, enough space is present on the sheet for additional specific comments regarding individual progressive psychomotor learning.

The Schedule of Instruction allows the teacher a great deal of creativity in the actual teaching process but identifies the psychomotor skills to be mastered. The first approach to a skill may not be successful, therefore the teacher may have to create alternative approaches and also the teacher must determine the amount of practice. After the first class session, we always began the other sessions with mastery demonstration of a previously learned stunt. This process served to provide reinforcement of the psychomotor learning and to maintain a high level of success for the child.

SCHEDULE OF INSTRUCTION

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration _____ 2. Verbal Explanation _____ 3. Manual Manipulation _____ 4. Minimal Physical Assistance _____ 5. Verbal Prompt _____ 6. Upon Request _____ 7. Mastery Demonstration	1. Line Walking according to given directions The Student Will Be Able To: 1.1 Stand with the weight evenly distributed on both feet 1.2 Step forward and maintain erect body posture while transferring weight from one foot to the other 1.3 Transfer his weight from heel to toe with arms in opposition to the legs COMMENTS: The instructor should provide verbal cues allowing the students to change direction on command. Alternative Method--many gymnasiums have color-coded boundary lines for various courts which can be used for determining changes in direction.	4. Minimal Physical Assistance _____ 5. Verbal Prompt _____ 6. Upon Request _____ 7. Mastery Demonstration _____

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	2. Walk With An Object On Your Head	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	2.1 Walk with arms out to the side, palms down	6. Upon Request _____
_____ 4. Minimal Physical Assistance	2.2 Balance an object on the head	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	2.3 Walk on a line with the arms out to the side, palms down, while balancing an object on the head	
_____ 6. Upon Request	COMMENTS: The eyes should spot a stationary object at eye level in front of the body. Bean bags are a good item to use for balancing.	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	3. Run On Balls Of Feet	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	3.1 Transfer the weight evenly from one foot to another at a moderate speed	6. Upon Request _____
_____ 4. Minimal Physical Assistance	3.2 Transfer weight evenly from one foot to another without letting the heel touch the floor at a fast pace	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	3.3 Move the arms in opposition to the legs	
_____ 6. Upon Request	COMMENTS: The eyes could spot a stationary object while lifting the knees up high.	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	4. Slide To The Side	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	4.1 Step sideways to the left or right onto the bent leg and transfer the weight to that foot	6. Upon Request _____
_____ 4. Minimal Physical Assistance	4.2 Draw the trailing foot to the other foot while extending the leading leg	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	4.3 Shift the weight to the trailing leg while lifting the leading foot in preparation for the next step	
_____ 6. Upon Request		
_____ 7. Mastery Demonstration		

COMMENTS: Slide can be performed sideways or on a diagonal.

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	5. Grapevine Step	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	5.1 Step sideways on the left foot then crossing the right foot over	6. Upon Request _____
_____ 4. Minimal Physical Assistance	5.2 Bring the left leg from the back to the sideward position and step behind the left foot with the right foot	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	5.3 Bring the left foot back to the original sideward position	
_____ 6. Upon Request	COMMENTS:	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	6. Skip With Amplitude	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	6.1 Perform a step hop on either the right or left foot	6. Upon Request _____
_____ 4. Minimal Physical Assistance	6.2 Bring the opposite leg forward so that the thigh is parallel to the floor	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	6.3 Repeat this procedure several times	
_____ 6. Upon Request	COMMENTS:	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	7. Forward Body Wave	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	7.1 Stand erect with the feet together and the arms to the side	6. Upon Request _____
_____ 4. Minimal Physical Assistance	7.2 Bend at the knees and hips, and tilt the head forward	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	7.3 Push the hips forward arching the back while swinging the arms downward, backward and up in a circular motion	
_____ 6. Upon Request	7.4 Assume an extended stand position	
_____ 7. Mastery Demonstration	COMMENTS:	

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	8. Body Wave	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	8.1 Stand erect with the feet together and the arms to the side	6. Upon Request _____
_____ 4. Minimal Physical Assistance	8.2 Lift the arms forward while bending at the knees and hips	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	8.3 Push the knees and hips forward while arching the back and swinging the arms downward, backward and upward	
_____ 6. Upon Request	8.4 Come to an extended standing position	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	9. Hurdlers Splits	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	9.1 Assume a seated position with one leg extended and the other bent back to the side	6. Upon Request _____
_____ 4. Minimal Physical Assistance	9.2 Bend over and try to place head on the knee of the extended leg	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	9.3 Lie flat back keeping the flexed knee on the floor	
_____ 6. Upon Request	9.4 Alternate legs	
_____ 7. Mastery Demonstration	COMMENTS: The flexed knee should stay in contact with the floor. A 90 degree angle is good for this exercise. The arms can be used to help the student get up and down.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	10. Front Back Splits	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	10.1 Stand in a stride position and gradually slide the front foot forward lowering his hips to the floor	6. Upon Request _____
_____ 4. Minimal Physical Assistance	10.2 Keep the back erect with the arms extended overhead and to the side	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	COMMENTS: Do not attempt to go to the floor on the first trial. You may place the hands on the floor to prevent you from going down too far too soon.	
_____ 6. Upon Request		
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	11. Piked Body Straddle Position	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	11.1 Assume a straddle position feet shoulder width apart	6. Upon Request _____
_____ 4. Minimal Physical Assistance	11.2 Extend arms to side, palms facing down	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	11.3 Lean the chest forward until it is parallel to the floor	
_____ 6. Upon Request	11.4 Maintain balance in a straddle stand keeping the head up	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	12. Supine Arch	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	12.1 Assume a supine position on the floor with arms and legs extended	6. Upon Request _____
_____ 4. Minimal Physical Assistance	12.2 Lift the head, chest, and legs at the same time keeping them extended	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	12.3 Lower chest back to the floor	
_____ 6. Upon Request	12.4 Repeat	
_____ 7. Mastery Demonstration	COMMENTS: The legs and arms should be kept straight at all times while the head is up off the ground facing forward. The back should be arched as high as possible. Have the student lie on the floor facing a wall with the arms extended forward and have them reach as high up the wall as they can while also lifting the legs straight.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	13. Sit Against The Wall With Arms Folded Across the Chest	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	13.1 Sit against the wall keeping the thighs parallel to the floor and the back straight	6. Upon Request _____
_____ 4. Minimal Physical Assistance	13.2 Sit against the wall with the arms folded across the chest	7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request		
_____ 7. Mastery Demonstration		

COMMENTS: The feet are 12 to 18 inches from the wall depending on the size of the child. Try to hold the position for one minute.

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	14. Hand and Knee Balance	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	14.1 Kneel on the floor placing the hands palms down on the floor beneath the shoulders.	6. Upon Request _____
_____ 4. Minimal Physical Assistance	14.2 Raise the feet and calves	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	COMMENTS: They can lift one leg and the opposite arm and try to keep their balance. Also the toes should be pointed. Keep the head up and look forward.	
_____ 6. Upon Request		
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	15. Knee Scale	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	15.1 Assume a hands and knee balance on the floor	6. Upon Request _____
_____ 4. Minimal Physical Assistance	15.2 Raise one leg and extend it rearward	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	COMMENTS: The back should be arched keeping the head up.	
_____ 6. Upon Request		
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	16. Demonstrate Two or More Positions With 1 or Both Knees as Base	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation		5. Verbal Prompt _____
_____ 3. Manual Manipulation	The Student Will Be Able To:	6. Upon Request _____
_____ 4. Minimal Physical Assistance	16.1 Demonstrate a variety of positions using one or both knees as a base.	7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request	COMMENTS:	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	17. Stump Walk	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	17.1 Assume a kneeling position on the floor	6. Upon Request _____
_____ 4. Minimal Physical Assistance	17.2 Grasp the ankles and draw the feet up to the hips	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	17.3 Walk forward on the knees while holding onto the ankles	
_____ 6. Upon Request	SPOTTING: Support the shoulders from behind.	
_____ 7. Mastery Demonstration	COMMENTS: Arch the back and pull the ankles close to the hips.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	18. Releve'	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	18.1 Plantar flex the ankle and press all of the toes on the floor	6. Upon Request _____
_____ 4. Minimal Physical Assistance	18.2 Keep the chin and shoulders level while lifting the body weight high	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	18.3 Perform tip-toe turn with the knees straight	
_____ 6. Upon Request	COMMENTS: Important to keep the knees straight and to maintain correct alignment of torso when rising to half-toe. Good alignment in the pelvis is an important factor in developing one's sense of balance.	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	19. Perform A One Leg Balance	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	19.1 Stand erect and extend arms to the side for balance	6. Upon Request _____
_____ 4. Minimal Physical Assistance	19.2 Stand on one leg while holding the ankle of the other	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	19.3 Stand erect on one leg with the arms out to the side for balance	
_____ 6. Upon Request	COMMENTS: Variations of this are front scale, side scale, and needle scales.	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	20. Straight Leg Kick to Front, Side, and Rear	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	20.1 Stand with the body erect	6. Upon Request _____
_____ 4. Minimal Physical Assistance	20.2 Extend arms to the side to maintain balance	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	20.3 Extend the leg forward lifting from the hips as high as possible keeping the legs straight	
_____ 6. Upon Request	20.4 Extend the leg to the side, keeping the body erect	
_____ 7. Mastery Demonstration	20.5 Extend the leg backward, keeping the body erect and the leg straight	
	SPOTTING: The student may perform these skills while holding onto a chair or bar to maintain their balance	
	COMMENTS: The body should be kept erect at all times while lifting the leg. The legs should be extended each position. Should be able to perform in a smooth movement.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	21. Forward Kick - 1/2 Turn - Arabesque	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	21.1 Stand with the body erect	6. Upon Request _____
_____ 4. Minimal Physical Assistance	21.2 Extend the right leg forward and upward so that it is parallel to the floor	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	21.3 Turn toward the support leg until the torso is in a supine position and maintain the extension of the right leg	
_____ 6. Upon Request	SPOTTING: Place your hands on the performer's shoulders after they have made the 1/2 turn to help the students maintain their balance.	
_____ 7. Mastery Demonstration	COMMENTS: Keep the extended legs straight and extend the arms to maintain balance. As the leg is lifted, twist the hips inward.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	22. Various Types of Push-Ups	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	22.1 Assume a supine position on the floor placing the hands beneath the shoulders	6. Upon Request _____
_____ 4. Minimal Physical Assistance	22.2 Raise up on the toes and extend the arms; bring chest, stomach and legs off of the floor	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	22.3 Keep the back and body straight	
_____ 6. Upon Request	COMMENTS: Push-ups may be performed by using a wider hand placement or by extending the arms out in front of the shoulders.	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	23. Four Count Squat	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	23.1 Assume an erect posture with the hands to the side	6. Upon Request _____
_____ 4. Minimal Physical Assistance	23.2 Assume a squatting position placing the hands on the ground	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	23.3 Bend forward at the waist placing the hands on the floor while simultaneously kicking the feet back finishing in a front leaning rest position	
_____ 6. Upon Request	23.4 Bring the feet forward and place them between the hands assuming a squatting position	
_____ 7. Mastery Demonstration	23.5 Stand erect	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	24. Wheelbarrow	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	24.1 "B" assumes a front leaning support position with legs spread while "A" stands between "B's" legs grasping the knees and picking the legs up	6. Upon Request _____
_____ 4. Minimal Physical Assistance		7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request	24.2 "B" walks forward on his hands, while "A" holds his legs up	
_____ 7. Mastery Demonstration	24.3 Kick the feet back assuming a front leaning rest position	
	24.4 Bring the feet forward and place them between the hands	
	24.5 Stand erect	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	25. Walk-Up Wall From Push-Up, Position and Walk Down	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	25.1 Assume a front leaning support with the feet against the wall	6. Upon Request _____
_____ 4. Minimal Physical Assistance	25.2 Move the feet in a walking motion up the wall while simultaneously moving the hands inward toward the wall	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	25.3 Assume a handstand position facing the wall	
_____ 6. Upon Request	25.4 Move the feet in a walking motion down the wall while simultaneously moving the hands outward from the wall	
_____ 7. Mastery Demonstration	25.5 Assume a front leaning support	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	26. Swedish Fall	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	26.1 Stand erect with arms extended over head	6. Upon Request _____
_____ 4. Minimal Physical Assistance	26.2 Lean forward maintaining erect posture while simultaneously lifting the leg behind and reaching for the floor	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	26.3 Lower the chest almost to the floor while extending the left leg upward	
_____ 6. Upon Request	SPOTTING: Place your hands on the performer's shoulders and prevent them from falling down too fast.	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	27. Jump From A Squat Position - Full Extension To A Squat	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	27.1 Bend his knees and assume a squat position.	6. Upon Request _____
_____ 4. Minimal Physical Assistance	27.2 Spring into the air, arms and legs fully extended.	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	27.3 Land once again with bent knees in a squatting position.	
_____ 6. Upon Request	SPOTTING: Place your hands around the performer's waist and lift as he/she jumps to the full extension. Gradually lower the performer to the squat position.	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	28. Arched Jump	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	28.1 Spring into the air keeping the legs extended	6. Upon Request _____
_____ 4. Minimal Physical Assistance	28.2 Spring into the air and throw the shoulders and head backwards extending arms straight over the head and arching the back.	7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request		
_____ 7. Mastery Demonstration		

SPOTTING: Place your hands around the waist and support the performer as they jump. Do Not allow the performer to fall backward.

COMMENTS:

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	29. Leap Frog Over a Partner or Group	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	29.1 Stand behind a squatting partner and place his hands on the partner's back.	6. Upon Request _____
_____ 4. Minimal Physical Assistance	29.2 Jump over the squatting partners' back while pushing off with the hands.	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	29.3 Jump over the partner's back and land in a squatting position.	
_____ 6. Upon Request	29.4 Repeat.	
_____ 7. Mastery Demonstration	COMMENTS:	

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	30. Jump Like A Frog	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	30.1 Assume a squatting position with the knees spread.	6. Upon Request _____
_____ 4. Minimal Physical Assistance	30.2 Place the hands on the floor between the feet	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	30.3 Move the hands 1½ - 2 feet out in front of the feet, then bring the feet up to the hands assuming the original position.	
_____ 6. Upon Request	30.4 Jump like a frog.	
_____ 7. Mastery Demonstration	COMMENTS: The arms should be straight and kept together.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	31. Jump Like A Rabbit	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	31.1 Squat and place the hands on the floor by the feet.	6. Upon Request _____
_____ 4. Minimal Physical Assistance	31.2 Reach forward with the hands and leap with the feet.	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	31.3 Land on the hands and bring the feet to the floor just behind them.	
_____ 6. Upon Request	COMMENTS: The student should stretch out as much as possible and bend the arms gradually as he lands. He should not place hands on the floor until the feet have left it.	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	32. Jump In The Air And Clap Your Heels	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	32.1 Stand with the feet shoulder width apart with the knees slightly bent	6. Upon Request _____
_____ 4. Minimal Physical Assistance	32.2 Jump into the air and clap the heels together	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	SPOTTING: Stand behind the performer and place your hands around his/her waist. Lift slightly as the performer jumps. Maintain your support until the performer has regained his/her balance.	
_____ 6. Upon Request	COMMENTS: The student should practice getting good height so he will have time to click heels before landing.	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	33. Practice A Heel Click From The Side From A One Foot Balance	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation		5. Verbal Prompt _____
_____ 3. Manual Manipulation	The Student Will Be Able To:	6. Upon Request _____
_____ 4. Minimal Physical Assistance	33.1 Stand on one leg and while bending the other at the knee	7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request	33.2 Jump up and hit his heels together	
_____ 7. Mastery Demonstration	33.3 Land on the original foot on which he/she was standing	
	SPOTTING: Stand behind the performer and place your hands around his/her waist. Lift slightly as the performer jumps. Maintain your support until the performer has regained his/her balance.	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	34. Cat Leap	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	34.1 Stand with the feet together transferring the weight to the right foot	6. Upon Request _____
_____ 4. Minimal Physical Assistance	34.2 Bend the left leg as he raises his knee	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	34.3 Spring onto the left foot while lifting and bending right leg	
_____ 6. Upon Request	34.4 Performs the cat leap	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	35. Jump Up And Tuck	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	35.1 Assume a standing position with the feet shoulder width apart	6. Upon Request _____
_____ 4. Minimal Physical Assistance	35.2 Jump up and bring the knees to the chest	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	35.3 Clasp shins with both hands and quickly release them	
_____ 6. Upon Request	35.4 Land and maintain a balanced standing position	
_____ 7. Mastery Demonstration	SPOTTING: Stand behind the performer and place your hands on his/her hips. Lift as the performer jumps maintaining contact until balance is regained.	
	COMMENTS: The back should be kept erect and always look straight ahead.	

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	36. Jump To A Straddle	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	36.1 Assume a standing position with the feet shoulder width apart	6. Upon Request _____
_____ 4. Minimal Physical Assistance	36.2 Jump into the air and spread the extended legs apart	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	36.3 Maintain good posture while leaning slightly forward	
_____ 6. Upon Request	36.4 Reach out and touch the toes	
_____ 7. Mastery Demonstration	36.5 Land and maintain a balanced standing position	
	SPOTTING: Stand behind the performer and place your hands on his/her hips. Lift as the performer jumps maintaining contact until balance is regained.	
	COMMENTS: Get good height with your jump.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	37. Jump To A Pike Position	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	37.1 Assume a standing position with the feet shoulder width apart	6. Upon Request _____
_____ 4. Minimal Physical Assistance	37.2 Extend the arms forward	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	37.3 Jump upward into the air raising the extended legs forward assuming a piked position	
_____ 6. Upon Request	37.4 Land and maintain a balanced standing position	
_____ 7. Mastery Demonstration	SPOTTING: Stand behind the performer and place your hands on his/her hips. Lift as the performer jumps maintaining contact until balanced is regained.	
	COMMENTS: The student should lean slightly forward keeping the head up and looking forward.	

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	38. Jump To A Half Turn	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	38.1 Bend knees and spring into the air	6. Upon Request _____
_____ 4. Minimal Physical Assistance	38.2 Turn the arms in a circling motion to the side	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	38.3 Twist to a half turn	
_____ 6. Upon Request	SPOTTING:	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	39. Jump To A Full Turn	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	39.1 Jump into the air	6. Upon Request _____
_____ 4. Minimal Physical Assistance	39.2 Shift the arms in a circling motion to one side	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	39.3 Continue twisting in this direction completing a 360 degree turn	
_____ 6. Upon Request	SPOTTING:	
_____ 7. Mastery Demonstration	COMMENTS: This is one continuous motion done without a pause and also good height is needed in your jump.	

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration _____ 2. Verbal Explanation _____ 3. Manual Manipulation _____ 4. Minimal Physical Assistance _____ 5. Verbal Prompt _____ 6. Upon Request _____ 7. Mastery Demonstration	40. Seat Balance, Hands Holding Ankles The Student Will Be Able To: 40.1 Assume a sitting position on the floor keeping the knees close to the chest and the feet flat on the floor 40.2 Grasp the ankles and extend the legs upward 40.3 Maintain his balance until body forms a "V" SPOTTING: Kneel to the side of the performer placing one hand on the back and one on the near thigh. Assist the performer in maintaining his/her balance. COMMENTS: The legs should be extended as straight as possible.	4. Minimal Physical Assistance _____ 5. Verbal Prompt _____ 6. Upon Request _____ 7. Mastery Demonstration _____

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	41. V-Sit	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	41.1 Sit on the floor with the legs elevated and straight with hands on the floor	6. Upon Request _____
_____ 4. Minimal Physical Assistance	41.2 Perform a V-Seat maintaining good balance with the arms raised to the side	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	SPOTTING: Kneel to the side of the performer placing one hand on the back and one on the near thigh. Assist the performer in maintaining his/her balance.	
_____ 6. Upon Request	COMMENTS:	
_____ 7. Mastery Demonstration		

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	42. Crab Walk	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	42.1 Assume a sitting position	6. Upon Request _____
_____ 4. Minimal Physical Assistance	42.2 Place hands on the floor below the shoulders	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	42.3 Move the feet forward until the hips can be raised high	
_____ 6. Upon Request	42.4 Move a hand first, then the foot on the same side	
_____ 7. Mastery Demonstration	SPOTTING:	
	COMMENTS: The fingers should be pointed away from the body and the arms should be shoulder width apart.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	43. Inch Worm	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	43.1 Assume a front leaning support	6. Upon Request _____
_____ 4. Minimal Physical Assistance	43.2 Leave the hands stationary while moving the feet up to them by taking small steps forward until the feet get about 12 inches from the hands	7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request		
_____ 7. Mastery Demonstration	43.3 Move the hands forward while the feet remain stationary	
	43.4 Assume a front leaning support again and repeat	
	SPOTTING:	
	COMMENTS: The legs should always remain straight.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	44. Seal Crawl	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	44.1 Assume a front leaning support	6. Upon Request _____
_____ 4. Minimal Physical Assistance	44.2 Move the body forward by placing one hand in front of the other while dragging the feet	7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request		
_____ 7. Mastery Demonstration	SPOTTING:	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	45. Walk Like A Happy Puppy	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	45.1 Walk on his hands and knees while swinging the head from side to side	6. Upon Request _____
_____ 4. Minimal Physical Assistance	SPOTTING:	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	COMMENTS: The hands and knee movements should be in opposition to each other.	
_____ 6. Upon Request		
_____ 7. Mastery Demonstration		

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	46. Wet Cat Walk	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	46.1 Bend forward at the waist and place both hands on the floor approximately 24 inches in front of the feet	6. Upon Request _____
_____ 4. Minimal Physical Assistance		7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request	46.2 Lift one leg in the air	
_____ 7. Mastery Demonstration	46.3 Move in a forward direction on both hands and one foot while shaking the free leg	
	SPOTTING:	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	47. Bear Walk	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	47.1 Lean forward from the waist and place the hands approximately 12 inches in front of the feet	6. Upon Request _____
_____ 4. Minimal Physical Assistance	47.2 Move the left hand and left foot forward keeping the legs straight	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	47.3 Move the right hand and right leg forward keeping the legs straight	
_____ 6. Upon Request	47.4 Repeat the above sequence	
_____ 7. Mastery Demonstration	SPOTTING:	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
____ 1. Physical Demonstration	48. Tandem	4. Minimal Physical Assistance ____
____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt ____
____ 3. Manual Manipulation	48.1 Assume a seated position on the back of a spotter who has assumed a position on all fours	6. Upon Request ____
____ 4. Minimal Physical Assistance	48.2 Lean forward placing the hands on the mat in front of the spotters while he then places his feet on the spotters hips	7. Mastery Demonstration ____
____ 5. Verbal Prompt	48.3 Move forward as a unit	
____ 6. Upon Request	SPOTTING:	
____ 7. Mastery Demonstration	COMMENTS: Once the student feels comfortable doing this, other students may be added to the stunt forming a centipede.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	49. Back To Back Pullover	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	49.1 Stand back to back with the instructor	6. Upon Request _____
_____ 4. Minimal Physical Assistance	49.2 Extend their arms above their heads as the instructor grasps the wrists	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	49.3 Roll across the instructor's back and land on his feet as the instructor leans forward placing the students' hands on the floor	
_____ 6. Upon Request		
_____ 7. Mastery Demonstration	SPOTTING: Stand to the side of the performer and make sure the student does not roll off the side of the instructor's back. Make sure that the performer places his/her hands on the floor and does not hit his/her head.	
	COMMENTS: The instructor should locate his center of gravity below the student's buttocks.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	50. Pull To Stand Position With Partner Starting Seated	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	50.1 Sit down facing another while bracing their feet against each other and grasping each other's hands	6. Upon Request _____
_____ 4. Minimal Physical Assistance	50.2 Pull with the arms while simultaneously extending the legs	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	50.3 Pull to a standing position	
_____ 6. Upon Request	SPOTTING:	
_____ 7. Mastery Demonstration	COMMENTS: The students should be approximately of equal weight.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	51. Form A Double Scooter	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	50.1 Assume a seated position facing another while sitting on each other's feet	6. Upon Request _____
_____ 4. Minimal Physical Assistance	51.2 Lean forward and grasp each other's shoulders and flexing the knees.	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	51.3 Raise the other person into the air by leaning backwards and extending the legs	
_____ 6. Upon Request	51.4 Lower the other person to the floor	
_____ 7. Mastery Demonstration	51.5 Assist the other performer by leaning forward as the other draws his legs in close to him.	
	SPOTTING:	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	52. Three Man Sideward Roll (requires coordination of efforts of three students)	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student (A = man on left; B = man in center; and C = man on right) Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	52.1 Kneel on their hands and knees, facing in the same direction, about 18 to 24 inches apart	6. Upon Request _____
_____ 4. Minimal Physical Assistance	52.2 As "B" rolls sideward to the left toward "A", "A" leaps over "B" and rolls right	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	52.3 As "A" rolls right "C" leaps over "A" to the left and immediately begins to roll	
_____ 6. Upon Request	52.4 As "C" rolls left, "B" leaps over "C" to the right and immediately begins to roll right	
_____ 7. Mastery Demonstration	SPOTTING:	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	53. Forward Roll - Tucked	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	53.1 Assume a squatting position	6. Upon Request _____
_____ 4. Minimal Physical Assistance	53.2 Perform a tucked forward roll landing on the shoulders and pushing lightly with the hands	7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request	53.3 Complete the forward roll by finishing in a squatting position	
_____ 7. Mastery Demonstration		

SPOTTING: Kneel beside the performer and place your hand on the back of the neck. Be sure to tuck the head as the performer goes into the forward roll.

COMMENTS:

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
____ 1. Physical Demonstration	54. Forward Roll From Straight Stand To Stand	4. Minimal Physical Assistance ____
____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt ____
____ 3. Manual Manipulation	54.1 Assume an extended stand position with the arms over the head	6. Upon Request ____
____ 4. Minimal Physical Assistance	54.2 Perform a tucked forward roll by placing the hands on the floor, tucking the head and landing on the shoulders	7. Mastery Demonstration ____
____ 5. Verbal Prompt	54.3 Complete the forward roll in an extended standing position	
____ 6. Upon Request	SPOTTING: Kneel beside the performer and place your hand on the back of the neck. Be sure to tuck the head as the performer goes into the forward roll.	
____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	55. Forward Roll From Lunge	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	55.1 Step forward on the left leg and flex the knee keeping the right leg straight and the chest high	6. Upon Request _____
_____ 4. Minimal Physical Assistance		7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request	55.2 Place the hands on the floor approximately 18 inches in front of the left foot	
_____ 7. Mastery Demonstration		
	55.3 Perform a forward roll by ending in an extended stand position	
	SPOTTING: Kneel beside the performer and place your hand on the back of the neck. Be sure to tuck the head as the performer goes into the forward roll.	
	COMMENTS:	

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	56. Forward Roll From A Straddle Position	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	56.1 Stand erect with the legs spread laterally as wide as possible	6. Upon Request _____
_____ 4. Minimal Physical Assistance	56.2 Place the hands on the mat while raising the hips and lowering the tucked head	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	56.3 Push with the hands as the shoulders strike the mat and assume a tucked position	
_____ 6. Upon Request	56.4 Keep the back rounded and lean forward finishing in a squat position	
_____ 7. Mastery Demonstration	SPOTTING: Kneel beside the performer and place your hands on the back of the neck. Be sure to tuck the head as the performer goes into the forward roll	

COMMENTS:

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	57. Free Roll	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	57.1 Assume a squat position with the knees apart and the arms raised to the side	6. Upon Request _____
_____ 4. Minimal Physical Assistance	57.2 Tuck the head and roll forward without allowing the hands or arms to touch the mat	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	57.3 Finish the free roll in a squat position	
_____ 6. Upon Request	SPOTTING: Kneel beside the performer and place your hands on the back of the neck. Be sure to tuck the head as the performer goes into the forward roll.	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	58. Diving Forward Roll	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	58.1 Stand on mat with the feet shoulder width apart	6. Upon Request _____
_____ 4. Minimal Physical Assistance	58.2 Dive forward placing hands on the mat while tucking the head and landing on the shoulders	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	58.3 Roll over and spring back to the feet	
_____ 6. Upon Request	SPOTTING: Kneel beside the performer and place your hand on the back of the neck. Be sure to tuck the head as the performer goes into the forward roll.	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	59. Back Shoulder Roll From Seated Position	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	59.1 Assume a sitting position	6. Upon Request _____
_____ 4. Minimal Physical Assistance	59.2 Lean slightly forward and roll backwards onto the back	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	59.3 Roll backwards allowing the arms to bend until the left shoulder lands on the mat	
_____ 6. Upon Request	59.4 Raise the hips and roll on the left shoulder to a sitting position	
_____ 7. Mastery Demonstration	SPOTTING: Kneel to the side of the performer and lift the hips slightly as the performer rolls to his shoulders.	
	COMMENTS: The knees should be kept close to chest. Keep the head tucked and the back rounded.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	60. Tucked Backward Roll	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	60.1 Assume a squatting position	6. Upon Request _____
_____ 4. Minimal Physical Assistance	60.2 Tuck the head while leaning slightly forward and rocking backward onto the buttock	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	60.3 Roll over backwards placing the hands beside the head and pushing slightly	
_____ 6. Upon Request	60.4 Assume the squat position in landing	
_____ 7. Mastery Demonstration	SPOTTING: Kneel to the side of the performer and lift the hips slightly as the performer rolls to his shoulders.	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	61. Backward Roll From A Squat Position Through A Pike Position To A Squat Position	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation		5. Verbal Prompt _____
_____ 3. Manual Manipulation	The Student Will Be Able To:	6. Upon Request _____
_____ 4. Minimal Physical Assistance	61.1 Assume a squat position with the knees together and the chest close to the thighs	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	61.2 Allow the body to slowly roll backward while placing the hands, palms up, close to the neck and shoulders	
_____ 6. Upon Request	61.3 Extend the legs until the hands touch the mat	
_____ 7. Mastery Demonstration	61.4 Place toes on the mat overhead and tuck the legs	
	61.5 As knees pass the eyes push with the hands and come to a squat position	
	SPOTTING:	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	62. Tuck Backward Roll From A Stretched Stand To A Stretched Stand	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation		5. Verbal Prompt _____
_____ 3. Manual Manipulation	The Student Will Be Able To:	6. Upon Request _____
_____ 4. Minimal Physical Assistance	62.1 Assume a tuck position from a stretch stand	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	62.2 Lean slightly forward and then rock backwards onto the buttocks	
_____ 6. Upon Request	62.3 Roll backwards placing the hands next to the head and push slightly	
_____ 7. Mastery Demonstration	62.4 Land in a tucked position	
	62.5 Assume a stretch stand position	
	SPOTTING: Kneel to the side of the performer and lift the hips slightly as the performer rolls to his shoulders	

COMMENTS:

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	63. Back Roll Walkout	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	63.1 Assume a squat position lean slightly forward and roll backwards onto the buttocks	6. Upon Request _____
_____ 4. Minimal Physical Assistance	63.2 Place the hands beside head and push as he rolls over backwards	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	63.3 Extend one leg back while the other leg remains bent as he walks out of the back-roll	
_____ 6. Upon Request	SPOTTING: Kneel to the side of the performer and lift the hips slightly as the performer rolls to his shoulders	
_____ 7. Mastery Demonstration	COMMENTS:	

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	64. Backward Straddle Roll	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	64.1 Assume a squat position, lean slightly forward and rock backwards onto the buttocks	6. Upon Request _____
_____ 4. Minimal Physical Assistance	64.2 Place the hands beside head and push with them as he rolls over backwards	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	64.3 Spread his legs as he comes out of the roll and assume a straddle stand	
_____ 6. Upon Request	SPOTTING: Kneel to the side of the performer and lift the hips slightly as the performer rolls to his shoulders	
_____ 7. Mastery Demonstration	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	65. Backward Roll From Pike Position To A Squat Position	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	65.1 Assume a pike position	6. Upon Request _____
_____ 4. Minimal Physical Assistance	65.2 Lower the buttock to the floor keeping the legs straight and together	7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request	65.3 Roll over backwards assuming a squat position	
_____ 7. Mastery Demonstration	SPOTTING: Kneel to the side of the performer and lift the hips slightly as the performer rolls to his shoulders	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	66. Head Forearm Balance	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	66.1 Assume a squat position	6. Upon Request _____
_____ 4. Minimal Physical Assistance	66.2 Rock forward and place forearms and head on the mat	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	66.3 Slowly raise the legs above the head	
_____ 6. Upon Request	66.4 Assume a head-forearm balance keeping the body extended	
_____ 7. Mastery Demonstration	SPOTTING: Kneel to the side of the performer placing your hands around his/her waist and help them maintain their balance.	
	COMMENTS: Place three discs on the floor showing the position of the hands and forehead.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	67. Head Stand From Tuck Position	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	67.1 Assume a squat position and place hands on the mat	6. Upon Request _____
_____ 4. Minimal Physical Assistance	67.2 Rock forward and place the forehead onto the mat	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	67.3 Move the feet toward the head causing the hips to raise	
_____ 6. Upon Request	67.4 Slowly raise the feet up over the head	
_____ 7. Mastery Demonstration	67.5 Assume a headstand	
	SPOTTING: Kneel to the side of the performer placing your hands around his/her waist and help them maintain their balance.	
	COMMENTS: Place three discs on the floor showing the position of the hands and forehead.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
____ 1. Physical Demonstration	68. Head Stand From A Lunge Position	4. Minimal Physical Assistance ____
____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt ____
____ 3. Manual Manipulation	68.1 Step forward on the right leg	6. Upon Request ____
____ 4. Minimal Physical Assistance	68.2 Lean forward bending the front knee putting the weight on it	7. Mastery Demonstration ____
____ 5. Verbal Prompt	68.3 Assume a lunge position	
____ 6. Upon Request	68.4 Place the hands and head on the mat	
____ 7. Mastery Demonstration	68.5 Raise legs slowly up off the floor	
	68.6 Assume a headstand position	
	SPOTTING: Kneel to the side of the performer placing your hands around his/her waist and help them maintain their balance	
	COMMENTS: Place three discs on the floor showing the position of the hands and forehead.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	69. Headstand From Prone Position	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	69.1 Assume a prone position placing the hands upon the shoulders	6. Upon Request _____
_____ 4. Minimal Physical Assistance	69.2 Draw the hips toward the hands while forming a triangle with the head and hands	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	69.3 Lift the hips over the head and slowly lift the legs together	
_____ 6. Upon Request	69.4 Assume a headstand	
_____ 7. Mastery Demonstration	SPOTTING: Kneel to the side of the performer placing your hands around his/her waist and help them maintain their balance	
	COMMENTS: Place three discs on the floor showing the position of the hands and forehead.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	70. Mule Kick From All Fours	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	70.1 Assume a position on all fours	6. Upon Request _____
_____ 4. Minimal Physical Assistance	70.2 Lean forward placing the body weight on the hands while raising the hips and feet	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	70.3 Extend the legs upward and push off with the hands	
_____ 6. Upon Request	70.4 Land on the feet	
_____ 7. Mastery Demonstration	SPOTTING:	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	71. Assume A Hand-Stand Support Against Wall	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	71.1 Place hands on floor close to a wall, (approximately 8-12 inches)	6. Upon Request _____
_____ 4. Minimal Physical Assistance	71.2 Keep the hands shoulder width apart	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	71.3 Kick one leg at a time up to rest against the wall	
_____ 6. Upon Request	71.4 Assume a hand stand position against the wall keeping the body erect	
_____ 7. Mastery Demonstration	SPOTTING: Stand to the side of the performer and grasp the legs as they kick into the handstand position. Help the performer to maintain balance.	
	COMMENTS: Use paper cut-outs shaped like hands to show where they should place their hands	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	72. Handstand Forward Roll	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	72.1 Place the hands on the floor shoulder width apart	6. Upon Request _____
_____ 4. Minimal Physical Assistance	72.2 Kick the legs up and over the head one at a time	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	72.3 Assume a momentary handstand	
_____ 6. Upon Request	72.4 Tuck the head and lower the shoulders to the floor	
_____ 7. Mastery Demonstration	72.5 Perform a forward roll	
	SPOTTING: Stand to the side of the performer and grasp the legs as they kick into the handstand position. Help the performer to maintain balance.	
	COMMENTS: Use paper cut-outs shaped like hands to show where they should place their hands.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	73. Bridge-Up	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	73.1 Lay on his back on the floor	6. Upon Request _____
_____ 4. Minimal Physical Assistance	73.2 Place the hands by the shoulders with the finger tips pointed toward the shoulders	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	73.3 Push the body upward arching the back while keeping the weight balanced on hands and feet	
_____ 6. Upon Request	73.4 Assume a backbend position	
_____ 7. Mastery Demonstration	SPOTTING:	
	COMMENTS:	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	74. Cartwheel	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	74.1 Kick either leg upward and place it sideward on the mat	6. Upon Request _____
_____ 4. Minimal Physical Assistance	74.2 Transfer the weight to the lead foot lifting the trailing leg	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	74.3 Bend sideward placing one hand then the other on the mat shoulder width apart	
_____ 6. Upon Request	74.4 Push off from the floor with the leading leg spreading the legs in the air	
_____ 7. Mastery Demonstration	74.5 Land with the legs spread slightly wider than shoulder width facing the same direction	
	SPOTTING:	
	COMMENTS: This is a four-count movement, i.e., hand, hand, foot, foot. Place paper cut-outs on the floor to show the position of the hands and feet.	

SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	75. Round Off	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	75.1 Run forward and take a short skip step placing the hands on the mat in front of him	6. Upon Request _____
_____ 4. Minimal Physical Assistance	75.2 Kick the legs up to a hand-stand position	7. Mastery Demonstration _____
_____ 5. Verbal Prompt	75.3 Turn the hips one-quarter-of-a-turn and snap the legs down	
_____ 6. Upon Request	75.4 Face the opposite direction from which he/she started	
_____ 7. Mastery Demonstration	SPOTTING:	
	COMMENTS: This movement is very similar to the cart-wheel, however, it is a three count movement, i.e., hand, hand, feet. This may be taught by pointing the finger of the first hand down toward the direction from which they have run.	

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SCHEDULE OF INSTRUCTION

Date Initiated	Stunt and Skills	Date Mastered
_____ 1. Physical Demonstration	76. Handspring - Forward	4. Minimal Physical Assistance _____
_____ 2. Verbal Explanation	The Student Will Be Able To:	5. Verbal Prompt _____
_____ 3. Manual Manipulation	76.1 Run forward placing both hands in front of him on the mat while simultaneously kicking the legs up to a handstand position	6. Upon Request _____
_____ 4. Minimal Physical Assistance		7. Mastery Demonstration _____
_____ 5. Verbal Prompt		
_____ 6. Upon Request	76.2 Push forcefully with the hands and shoulders allowing his momentum to carry him over	
_____ 7. Mastery Demonstration		
	76.3 Keep the body arched throughout the movement and the arms overhead	
	SPOTTING: Several methods may be used in spotting this particular stunt, however, it is strongly suggested that a spotting belt be used for this.	
	COMMENTS: Several lead-up activities, i.e., performing a handspring over a rolled mat, off a trampoline into a heavily padded area, or over a person's back should be employed prior to attempting this stunt.	

CHAPTER 3

EVALUATION OF THE STUNTS AND TUMBLING CURRICULUM

Evaluation of a psychomotor learning model is critical to the decision making process regarding incorporation into the physical education curriculum. In order to be effective, evaluation must be a systematic process that determines the extent to which educational objectives are achieved by pupils. Evaluation is a more comprehensive and inclusive term than measurement and includes both qualitative and quantitative descriptions of pupil behavior plus value judgments concerning the desirability of the selected behavior.

The effective evaluation of a psychomotor curriculum model for handicapped children must include a comprehensive field test. A two group experimental design was utilized to field test the psychomotor curriculum. Twenty-two TMR's ranging in age from 10 to 15 were selected as subjects for the field test. All subjects participated in the sixteen week acclimation program as described in Chapter 1. Two weeks were allocated for pre-measures of selected motor performance tasks. The reliability coefficients obtained are presented in Table 1. After pre-testing of the subjects was completed, they were randomly divided into two groups of eleven. The pre-measurement data was subjected to Multivariate

Analysis of Variance (MANOVA) and no significant differences were obtained between the groups (See Table 2).

Table 2

MANOVA STATISTICAL TREATMENT RESULTS ON PRE-MEASUREMENT OF SELECTED MOTOR PERFORMANCE PARAMETERS

Degrees of Freedom	Required F-Ratio	Obtained Approximate F-Ratio
1/11	4.84 at 0.05 level	1.0532

EXPERIMENTAL TREATMENT

The independent variable for the field experiment was the Mastery Learning Psychomotor Curriculum. Two levels of the independent variable were used in the study. The first level of the independent variable was the teaching of the psychomotor curriculum as described in Chapters 1 and 2. The second level of the independent variable was the control or placebo treatment in which the subjects were given equivalent teacher attention and time. The experimental treatment was randomly assigned to one of the two groups. Group I was the control group and Group II was the experimental group. Both groups received their respective treatments for an hour per day, four days a week for eighteen weeks.

Mastery Learning/Psychomotor Teaching

Four teachers were trained prior to the advent of the experimental treatment. They were instructed how to teach

the stunts and tumbling activities using the Stability of Presentation Model. With the exception of the lead teacher, none of the teachers had any more gymnastics background than would normally be expected of a physical education teacher. Conferences with the lead teacher of approximately 15 minutes duration were conducted after each class session. Student progress was discussed and alternative approaches to the stunts and tumbling tasks were planned for the students. The teachers rotated among the students in order to reduce the student identification with only one teacher and to reduce singular teacher's influence. The subjects were familiar with all the teachers since they had been involved in the sixteen week acclimation phase.

Placebo (Control)

A placebo treatment was planned and implemented for the control group. A doctoral candidate assisted by three teachers conducted an experimental study to determine the effects of cross-lateral innervation on strength development.[1] The control group participated in this phase which primarily involved an arm curl exercise. During the time the control subjects were not involved in their exercise phase, they participated in loosely structured recreational activities

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[1]Barry B. Beedle. "The Cross Exercise Phenomenon and the Mentally Retarded." Unpublished Doctor's Dissertation, University of Mississippi, 1978.

with their four teachers. The placebo treatment was designed to equate the time and teacher effects on the study.

POST MEASURES OF PSYCHOMOTOR LEARNING MODEL

The post-measurement of the psychomotor learning model were divided into three discreet categories. The first category was the mastery learning of the stunts and tumbling psychomotor curriculum that occurred during the eighteen week training period. The second category was the assessment of selected motor performance parameters, and the third category was a subjective evaluation of student behavior during class or teaching sessions.

Mastery Learning of Psychomotor Tasks

Mastery learning of the psychomotor tasks of the stunts and tumbling curriculum was recorded for each student in the experimental group. The percentage of mastery learning ranged from 73.68 to 100 per cent. Individual performances ranged from the mastery of 56 out of 76 stunts and 76 out of 76 stunts. The functionality of the psychomotor teaching model is well documented by the data provided in Table 3. The group mean for the number of tasks mastered was 65.63 and the mean per cent of mastery learning that occurred was 86.36 per cent.

Selected Motor Performance Parameters

Eleven motor performance parameters were selected to

Table 3

MASTERY LEARNING OF STUNTS AND TUMBLING CURRICULUM

Subject	No. of Stunts Mastered	Percentage Mastered
1	76	100 %
2	66	86.84%
3	73	96.05%
4	56	73.68%
5	66	86.84%
6	63	82.89%
7	59	77.63%
8	67	88.16%
9	57	75.00%
10	64	84.21%
11	75	98.68%
	$\bar{X}$ = 65.63	$\bar{X}$ = 86.36%

measure the influence of the stunts and tumbling curriculum on motor behavior. The parameters selected were considered to be representative of the broad area of motor performance that is necessary for functionality in our environment. The pre- and post-measurement procedures for the motor performance items are described in Chapter 1.

In order that the influence of the total program on motor behavior could be determined Multivariate Analysis of Variance (MANOVA) was selected for the statistical analyzation of the data. True differences were used in the analyzation and were determined by subtracting each subject's pre-score on a motor parameter from his post-score. Table 4 contains the results of the MANOVA statistical treatment. An F-ratio of 9.65 at one and eleven degrees of freedom was required for significance at the 0.01 level. An F-ratio of 10.7784 in favor of the experimental group (Group II) was obtained which is significant beyond the 0.01 level.

Table 4

MANOVA STATISTICAL TREATMENT RESULTS ON SELECTED MOTOR PERFORMANCE PARAMETERS

Degrees of Freedom	Required F-Ratio	Obtained Approximate F-Ratio
1/11	4.84 at 0.05 level	1.0532

Univariate results of the MANOVA statistical treatment are presented in Table 5. Both the control and the experimental

groups had positive gains on each motor parameter (variable). The mean gains were derived by subtracting the pre- from the post-measure on each variable. All significant differences on variables between the groups were in favor of the experimental group (Group II).

Significant differences were obtained on two of these three strength measures (Planton Flexion and Quadriceps Strength). A significant difference was obtained between groups on the shuttle run and the experimental group had a mean improvement of 4.038 seconds over the control group. Other significant differences included hand reaction time (audio/visual), balance and flexibility.

Behavior of Students During Class Sessions

Informal sessions were held by the teachers involved in the study at two week intervals. Behavior problems with students that had occurred during the class sessions were discussed and suggestions made for alleviation of the problems. Although no quantitative records of the behavior incidents were recorded, the majority of the discussion involved the control group. The problems were primarily in the related areas of motivation, attention span and task performance.

The motivation level or daily entry level after six weeks of treatment was higher for the experimental group. The attention span of the experimental group appeared to

TABLE 5

UNIVARIATE RESULTS OF MANOVA STATISTICAL TREATMENT ON SELECTED MOTOR PERFORMANCE PARAMETERS

Variable	Control $\bar{X}$ Difference of Group I (Post - Pre)	Experimental $\bar{X}$ Difference of Group II (Post - Pre)	F-Ratio
Plantor Flexion (lbs.)	+5.67	+21.12	9.869*
Quadriceps Strength (lbs.)	+3.88	+15.30	12.580*
Hamstring Strength (lbs.)	+1.76	+1.29	0.019
Shuttle Run (seconds)	-0.442	-4.48	30.896*
Hand Audio (seconds)	+0.005	-0.072	12.322*
Foot Audio (seconds)	-0.024	-0.048	0.807
Hand Visual (seconds)	-0.006	-0.039	4.882*
Foot Visual (seconds)	-0.025	-0.057	0.993
Balance 30 Degrees (seconds)	+0.438	+3.155	11.766*
Balance 20 Degrees (seconds)	+0.247	+2.414	11.075*
Flexibility (Centimeters)	+1.282	+7.600	7.738*

*An F-Ratio of 4.35 for 1 and 20 degrees of freedom required for significance at the 0.05 level.

increase as the tasks became more difficult in the progressive curriculum. Task performance actually improved as the experimental subjects progressed through the curriculum. Attention to verbal instruction and visual demonstration of tasks improved and the students took more pride in their individual performance during mastery sessions.

The control group became argumentive with their teachers regarding task performance. Motivation and attention span of the individual students appeared to vary daily with no discernable pattern evident. The same general problems occurred during recreation periods but to a lesser degree than during specific task performance. The difference between the classroom behavior of the experimental and control groups was attributed to the verbal reinforcement by the teachers, the mastery demonstration attention (peer group acceptance) and the immediate feedback in skill acquisition.

EVALUATION OF THE PSYCHOMOTOR TEACHING MODEL

The measures used in the evaluation process were: (1) mastery learning of the psychomotor tasks; (2) selected motor performance parameters; and (3) behavior of students during class sessions. The three measures become meaningful to the evaluation process when they are viewed in aggregate.

The primary measure of a psychomotor teaching model must be whether or not the educational objectives are met. A critical component of the mastery learning approach involves

concise identification of the tasks to be learned. After proper identification, the tasks should be arranged into a progressive sequence from easiest to more difficult. Individual tasks should be subdivided into specific skills to be learned. As indicated by the data in Table 3, the average for the experimental group of mastery learning was 86.36 per cent. The psychomotor model was successful in terms of the learning process of the psychomotor educational tasks. Individual achievement rates by the subjects ranged from 73.68 per cent to 100.00 per cent, which indicates that the efficiency rate of psychomotor learning is very high.

Measures of motor performance provided a basis from which to evaluate the effects of the learning of the psychomotor tasks on the motor behavior of the subjects. Muscular strength, agility and total body locomotion, reaction time, balance, and flexibility were the areas of psychomotor behavior evaluated. Results of the MANOVA statistical analysis indicate that these tasks accompanied by the psychomotor teaching model positively affected the motor behavior of the experimental subjects.

Further inspection of the univariate results in Table 5 indicate that leg strength (plantor flexion and quadriceps) was significantly increased. Those two strength areas are essential to effective locomotor movement.

Agility and total body locomotion was measured by the shuttle run. The experimental group decreased their shuttle

run time significantly (-4.038 seconds) more than the control group. This result indicates that the psychomotor teaching model of stunts and tumbling activities was extremely effective in improving total body control of the experimental subjects.

Hand reaction (audio and visual) time was reduced significantly by the experimental group as compared to the control group. There is a strong indication due to the measurement process utilized with time-on-task that this reduction may have been due to an alteration in the attention span of the subjects while involved in a psychomotor task. In essence, the experimental subjects improved their attention span regarding performance of a psychomotor task rather than their actual reaction time.

The subjects of the experimental group significantly improved their balance over the subjects in the control group. They significantly improved in both the 30 degree and 20 degree range, which indicates excellent improvement in total body balance as a result of the teaching program.

The last measure of motor behavior was flexibility. The experimental group improved significantly over the control group.

In summary, the evaluation of the psychomotor teaching model of stunts and tumbling establishes that it is a very effective psychomotor teaching model and the stunts and tumbling curriculum is beneficial to the positive development

of motor behavior of the mental retarded child. The physical education teacher incorporating this teaching model into the curriculum can reasonably expect: (1) a high rate of psychomotor learning; (2) a positive change in psychomotor behavior; and, (3) a reduction of behavior problems during class sessions.

BIBLIOGRAPHY

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1. Bell, Virginia Lee. Sensorimotor Learning. Pacific Palisades: Goodycar Publishing Company, Inc., 1970. (pp. 94-95).

2. Bloom, Benjamin S. Human Characteristics and School Learning. St. Louis: McGraw-Hill Book Company, 1976.

3. Dobbins, Alan and G. L. Rarick. "Structural Similarity of Motor Domain of Normal and Educable Retarded Boys." Research Quarterly, 46:447-456, December, 1975.

4. Edson, Tom A. "The Role of School in Stimulating Physical Development of Mentally Retarded Children." The Physical Activities Report, 449:1-8, August, 1979.

5. Fait, Hollis F. Special Physical Education, Adapted, Creative, Developmental. Philadelphia: W. B. Sanders Company, 1971.

6. Francis, R. J. and G. L. Rarick. "Motor Characteristics of the Mentally Retarded Youth," American Journal of Mental Deficiency. LXIII, March, 1959.

7. Howe, Clifford E. "A Comparison of Motor Skills of Mentally Retarded and Normal Children." Journal of Exceptional Children, 25:352-353, April, 1959.

8. Marteniuk, Ronald G. Information Processing in Motor Skills. Atlanta: Holt, Rhinehart and Winston, 1976. pp. 227-228.

9. O'Donnell, Patrick A. and Jan Eisenson. "Delacato Training for Reading Achievement and Visual-Motor Integration," Journal of Learning Disabilities, 2:441, 1969.

10. Rarick, G. Lawrence, James H. Widdop, and Geoffrey D. Broadhead. "The Physical Fitness and Motor Performance of Educable Mentally Retarded Children," Journal of Exceptional Children, XXXVI, March, 1970.

11. Robb, Margaret D. The Dynamics of Motor-Skill Acquisition. Englewood Cliffs: Prentice-Hall, Inc., 1972. (pp. 94-99).

12. Robbins, Melvin P. "A Study of the Validity of Delacato's Theory of Neurological Organization," Exceptional Children, 32:517-523, 1966.

13. Sage, George H. Introduction to Motor Behavior--A Neuropsychological Approach. Reading: Addison-Wesley Co., 1971. (417-421).

14. Seefedt, Vern. "A Summary of Reported Research in Perceptual Motor Programs," Proceedings of Mississippi Perceptual-Motor Symposium, Jackson. April 20-21,1973 (pp. 43-45).

15. Singer, Robert N. Motor Learning and Human Performance. New York: Macmillan Co., 1971. (178-81).

16. Slacks, Rosemary. "The Effects of Physical Activity Upon Perceptual Motor Spatial Abilities of Kindergarten Children," Exceptional Children, 33:113-116, 1966.

17. Waters, Margaret W. "The Effects of a Sequential Developmental Program of Physical Education on Reading Achievement," Unpublished Doctor's dissertation, University of Mississippi, 1974.